CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO.

WASTE DISCHARGE REQUIREMENTS
FOR
EL DORADO COUNTY
UNION MINE LANDFILL
CLASS II LANDFILL, CLOSED CLASS III LANDFILL
AND CLASS II SURFACE IMPOUNDMENT
OPERATION, CLOSURE AND POST-CLOSURE MAINTENANCE
EL DORADO COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Board) finds that:

1. El Dorado County (hereafter "Discharger") owns and operates the Union Mine Landfill (hereafter "landfill facility"). The Discharger submitted a June 2005 *Report of Waste Discharge and Joint Technical Document* (hereafter "RWD") to update previous Waste Discharge Requirements (WDRs) Order No. 98-238. Additional information was received on 1 August and 14 November 2005.

2. The landfill facility covered under this Order includes a partially closed unlined Class III landfill, an active Class II landfill, an active Class II surface impoundment, and a landfill gas collection and flare system. The Discharger also operates a septage and leachate treatment facility and wastewater spray fields adjacent to the landfill facility. Treated septage and landfill leachate are discharged to the spray fields under separate waste discharge requirements (WDRs). The overall facility is known as the Union Mine Disposal Site (hereafter "disposal site").

3. The Union Mine Landfill is approximately three miles south of the town of El Dorado in El Dorado County, in the northwest quarter of Section 12, T9N, R10 E, MDB&M (as shown on Attachment A, which is attached hereto and made part of the Order by reference). The total area of the disposal site is 321.6 acres, consisting of Assessor's Parcel Numbers 92-011-17, -20, -21, and -28, and several U.S. Bureau of Land Management parcels.

4. An underground gold mine, which operated from the 1860s through the 1940s, underlies part of the facility. Three mine tunnels, one mine adit, one stope and one mine shaft are in the vicinity of the Class II and III landfill areas. This Order also includes requirements for monitoring of surface discharges from the mine workings.

5. Most of the County's solid wastes are currently exported out of the county. Limited amounts of solid wastes are discharged to the Class II landfill. These wastes include dewatered sludge from the onsite wastewater treatment plant. However, the Discharger's

RWD anticipates that other wastes may be discharged to the Class II landfill on an as needed basis. The Class II surface impoundment accepts leachate from the landfill that is then routed to the wastewater treatment plant. The Class III landfill closed in 1998 and no longer accepts waste.

6. The Discharger filed a Report of Waste Discharge on 7 October 1998 requesting a revision of WDRs to approve an engineered alternative to the prescriptive requirement for the low permeability layer of the Class II landfill liner. The engineered alternative consisted of a geosynthetic clay liner (GCL) in place of two feet of compacted clay. The engineered alternative liner system was approved in previous WDRs Order No. 98-238. The approval of the use of GCL in engineered alternative liner system is continued under this updated Order. However, no expansion of the landfill liner system is authorized by this Order unless the Discharger submits a liner performance demonstration as required by the 17 April 2001 letter from the Executive Officer.

SITE DESCRIPTION

7. The landfill is in an area of steep terrain, surrounded by ridges with elevations ranging from 1,180 to 1,475 feet mean sea level (MSL). Land within 1,000 feet of the facility includes 10- and 20-acre residential lots and 20-acre agricultural parcels, and is adjacent to Bureau of Land Management land.

8. The landfill is underlain by weathered to fresh, thin-bedded slates and phyllite. The weathered zone ranges from 20 to 30 feet in depth. No Holocene faults are within 200 feet of the landfill. The potentially active Melones Fault Zone is 0.6 miles east of the facility. The Melones Fault Zone is part of the Foothills Fault system which has an estimated maximum credible earthquake (MCE) of 6.5 Richter Magnitude and a maximum probable earthquake of 5.5 Richter Magnitude.

9. Groundwater beneath the facility occurs in fractured bedrock, valley alluvium, and the underground mine workings. Groundwater flow direction is towards the east and southeast. Groundwater ranges in depth from less than 10 feet to 80 feet below ground surface.

10. Arsenic and iron are naturally occurring constituents in groundwater throughout t the mineralized belt of the Foothills. They are derived from sulfide minerals (primarily Pyrite and Arsenopyrite) that are associated with gold deposits in bedrock. Weathering of the mineralized rock creates acidic conditions and forms soluble metal complexes. Therefore, these constituents are not used for detection monitoring for the landfill units.

11. The groundwater monitoring network for the landfill area consists of three upgradient wells (MW-5, 6 and 10) and four downgradient wells (MW-7, 9 and 11, and UM-3). The groundwater monitoring network for the Class II surface impoundment consists of one

upgradient well (MW-C) and one downgradient well (MW-A). The wells are shown on Attachment B, which is attached hereto and made part of the Order by reference.

12. The beneficial uses of the groundwater are domestic and municipal supply, agricultural supply, and industrial supply as designated in *The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition.*

13. The facility receives an average 38.7 inches of precipitation per year as measured at the Placerville station. The 100-year wet season is 73.2 inches. The 100-year, 24-hour precipitation event is 6.1 inches. The 1,000-year 24-hour precipitation event is 7.6 inches. The estimated net annual evaporation is 39.7 inches based on pan evaporation data from the Auburn weather station. Maximum evaporation is expected in July with an average value of 11.66 inches. Minimum evaporation is expected in December with an adjusted average value of 1.02 inches.

14. Surface drainage is to Martinez Creek, a perennial stream 500 feet east of the facility. Martinez Creek is tributary to the North Fork Cosumnes River, which is tributary to the Cosumnes River, thence to the Sacramento-San Joaquin Delta.

15. *The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin. The beneficial uses of the Consumnes River are municipal and domestic supply; agricultural supply; water contact and non-contact water recreation; cold freshwater habitat, warm freshwater habitat; migration, spawning, reproduction and/or early development; and wildlife habitat.

16. Three storm water holding and settling basins at the facility provide removal of sediment in facility storm water run-on and runoff prior to discharge to Martinez Creek under the general storm water permit for industrial facilities.

WASTES AND THEIR CLASSIFICATION

17. The Discharger proposes to accept non-hazardous solid waste and designated waste for disposal in the Class II landfill. The Class II landfill is currently used on an as needed or contingent basis, and since 1997, has only received solid waste from the on-site offices and sludge generated from the on-site Leachate/Septage Treatment Facility.

18. Non-hazardous solid waste to be accepted at the Class II landfill includes non-hazardous, de-watered, wastewater treatment plant sludge and other general non-hazardous solid waste including municipal solid waste, agricultural waste, and construction/demolition waste. Designated wastes to be accepted include contaminated soils, provided they do not contain wastes at or above hazardous concentrations.

19. The Discharger proposes to discharge wastes to the Class II landfill containing greater than one percent (>1%) friable asbestos, which is a hazardous material. However, because these wastes do not pose a threat to groundwater quality, Section 25143.7 of the Health and Safety Code permits their disposal in any landfill which has WDRs that specifically permit the discharge provided that the wastes are handled and disposed of in accordance with other applicable state and federal statutes and regulations.

20. Leachate generated by the landfill is a designated waste. Leachate is discharged to the Class II surface impoundment. Other liquid wastes discharged to the Class II surface impoundment include landfill gas condensate (approximately 60 gallons per day) and runoff from the septage pump truck washout area (approximately 15,000 gallons per year).

DESIGN, OPERATION, CLOSURE AND POST-CLOSURE MAINTENANCE

Class III Landfill

21. The existing 35.3-acre Class III landfill unit is unlined and constructed over native materials. The Class III landfill unit was sited above-grade over some of the mine's interconnected stopes, shafts and tunnels. This unit no longer accepts wastes. According to the June 2005 RWD, 19.5 acres of the Class III landfill have received final cover and 15.8 acres remains to be closed.

22. According to the June 2005 RWD, the Discharger installed a prescriptive final cover on 4.9 acres of the northern and southeastern sideslopes of the Class III unit during October of 1997. This cover consists of a two-foot thick foundation layer, a one-foot thick low permeability layer, and a one-foot thick vegetative layer.

23. In the fall of 1998, the Discharger installed an engineered alternative final cover on 14.6 acres of the top and eastern sideslopes of the Class III unit. The engineered alternative final cover uses a GCL in place of the prescriptive one-foot thick low permeability barrier layer. The cover consists of a two-foot thick foundation layer, the GCL, and a one-foot thick vegetative layer. The engineered alternative final cover was approved by the Regional Board in previous WDRs Order No. 98-238. This order continues the approval of that engineered alternative final cover for the Class III landfill.

24. According to the June 2005 RWD, the Discharger has installed an interim cover on the 15.2 acres of the remaining 15.8-acre unclosed area of the Class III landfill. The interim cover consists of a one-foot foundation layer and a one-foot compacted clay with a hydraulic conductivity no greater than $1x10^{-7}$ cm/sec. The other 0.6-acre “inactive” area has received only one foot of cover soil.

25. The Discharger submitted a 14 November 2005 technical memorandum proposing an engineered alternative final cover on the unclosed portion of the Class III landfill. The engineered alternative final cover will consist of (from bottom to top) the existing one-

foot foundation layer and one-foot compacted clay layer, a 60-mil linear low-density polyethylene (LLDPE) geomembrane, and a one-foot thick vegetative soil layer capable of sustaining plant growth. Section 20190(a) of Title 27 allows the Regional Board to approve any alternative final cover design that it finds will continue to isolate the waste at least as well as would a prescriptive final cover design. The Discharger's proposal provides technical justification indicating that the proposed alternative cover will meet this requirement, including, but not limited to, the following:

a. Compacted clay layers are prone to desiccation and cracking that can greatly increase permeability.

b. Compacted clay layers are vulnerable to large increases in permeability from freeze/thaw cycles.

c. The hydraulic conductivity of an LLDPE geomembrane is $1x10^{-13}$ cm/s, which is substantially less than a compacted clay layer.

d. Compacted clay layers must be carefully moisture conditioned during construction, and many factors influence their effectiveness such as clod size, particle size, uniformity, and compaction coverage.

e. Compacted clay layers are more susceptible to differential settlement than an LLDPE geomembrane.

f. The cost of a compacted clay layer is much greater, especially since there is no on-site source of clay.

Based on these factors, and since the proposed final cover already includes a compacted clay layer as would be required under the prescriptive final cover, the Regional Board hereby approves the use of the proposed engineered alternative final cover for the Class III landfill at the Union Mine Landfill.

26. A toe drain consisting of a gravel-filled trench runs the length of the junction between the Class III and Class II landfills. The purpose of the drain is to collect leachate generated at the toe of the Class III landfill and transfer the leachate to the Class II surface impoundment.

27. The Discharger submitted a February 2000 *Preliminary and Partial Final Postclosure Maintenance Plan* providing the plan for post-closure maintenance of the landfills. This Order includes requirements for post-closure maintenance of closed landfill units in accordance with this plan.

Class II Landfill

28. The 6.0-acre Class II landfill is lined with a composite liner system consisting of a geomembrane underlain by a two-foot thick low permeability layer on the base and a geosynthetic clay liner on the sideslopes. The unit also has a blanket gravel leachate collection system. The June 2005 RWD states that the 6.0-acre area of the Class II landfill will receive final cover when the area reaches the final permitted grade.

29. The February 2000 closure plan provided the proposed preliminary closure design for the Class II landfill. The proposed final cover is the same engineered alternative design of a two-foot thick foundation layer, a GCL, and a one-foot thick vegetative layer. Given that the estimated life of the 6.0-acre Class II unit was over 33 years in 2000, closure of this unit may be many years or decades away. Therefore, the Regional Board is deferring approval of the alternative cover design for the Class II landfill to a future update or revision of the WDRs. This Order continues to require a prescriptive final cover for the Class II landfill that includes a geomembrane layer in addition to the components in the proposed alternative cover.

30. The Discharger constructed a groundwater underdrain and a compacted fill layer to maintain a 5-foot minimum separation between groundwater and wastes at the side slopes of the landfill. The underdrain consists of one foot of gravel on the base and sideslopes, toe drains, and piping.

Class II Surface Impoundment

31. The Class II surface impoundment is used to contain up to two million gallons of landfill leachate, landfill gas condensate, and runoff from the septage truck washout area. The liner design components are from top to bottom: 60-mil HDPE geomembrane, two foot clay liner with $1x10^{-7}$ cm/sec hydraulic conductivity, two gravel filled LCRS trenches running the length of the surface impoundment, and two vacuum lysimeters.

CEQA AND OTHER CONSIDERATIONS

32. On 10 May 1994, the El Dorado County Board of Supervisors certified an April 1994 addendum to the January 1992 final environmental impact report (EIR) for the landfill facility. Both the January 1992 final EIR and the April 1994 addendum were for expansion and closure of the facility. El Dorado County filed a Notice of Determination on 27 April 1992 in accordance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) and CEQA guidelines (14 CCR Section 15000 et seq.). The EIR concluded that “the proposed project would result in long-term and cumulative impacts to hydrologic resources due to the existing landfill activities, presence of mine shafts, alteration of natural drainage patterns, erosion control, and water quality contamination.” The EIR also stated that “the effects can be reduced to below levels of significance through a number of proposed design, monitoring, control, and mitigation

measures." The Regional Board considered the EIR and incorporated mitigation measures from the environmental impact report into these waste discharge requirements designed to prevent potentially significant impacts to design facilities and to water quality, including (but not limited to):

a. Monitoring of groundwater, surface water, and mining features as required in monitoring and reporting as required in MRP No. _____.

b. A requirement that the Discharger maintain assurances of financial responsibility for initiating and completing corrective action for all known and reasonably foreseeable releases from the waste management units.

c. Requirements for composite liner systems and leachate collection for the Class II landfill and surface impoundment.

d. Requirements for final cover systems for all closed landfill units.

e. Requirements for precipitation and drainage control systems that are designed and constructed to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 1,000-year, 24-hour precipitation conditions for Class II WMUs and 100-year, 24-hour precipitation conditions for Class III WMUs.

33. This Order implements:

a. The Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin, Fourth Edition.

b. The prescriptive standards and performance goals of Title 27, CCR, Division 2, Subdivision 1, effective 18 July 1997, and subsequent revisions.

c. The prescriptive standards and performance criteria of Part 258, Title 40 of the Code of Federal Regulations, Subtitle D of the Resource Conservation and Recovery Act.

d. State Water Resources Control Board Resolution No. 93-62, Policy for Regulation of Discharges of Municipal Solid Waste, adopted 17 June 1993.

34. The facility is not within a 100-year floodplain as identified by the Federal Emergency Management Agency (FEMA).

35. Section 13267(b) of California Water Code provides that: "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposed to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who had discharged, discharges, or is suspected of discharging, or who proposed to

discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports."

36. The monitoring and reporting program required by this Order and the attached "Monitoring and Reporting Program No. ____" are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.

PROCEDURAL REQUIREMENTS

37. The action to revise WDRs for these waste management facilities is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.), in accordance with Title 14, CCR, Section 15301.

38. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.

39. The Regional Board has notified the Discharger and interested agencies and persons of its intention to revise the waste discharge requirements for this facility.

40. In a public hearing, the Regional Board heard and considered all comments pertaining to this facility and discharge.

41. Any person affected by this action of the Regional Board may petition the State Water Resources Control Board to review the action in accordance with Sections 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Water Resources Control Board, Office of Chief Counsel, P.O. Box 100, Sacramento, California 95812, within 30 days of the date of issuance of this Order. Copies of the laws and regulations applicable to the filing of a petition are available on the Internet at http://www.waterboards.ca.gov/water_laws/index.html and will be provided on request.

IT IS HEREBY ORDERED, pursuant to Sections 13263 and 13267 of the California Water Code, that Order No. 98-238 is rescinded and that El Dorado County and its agents, assigns and successors, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. The discharge of wastes classified as "hazardous" as defined by Title 27 CCR, is prohibited.

2. The discharge of waste to the Class III landfill unit is prohibited.

3. The discharge to landfill units of liquid or semi-solid waste (i.e., waste containing less than 50 percent solids), except dewatered sewage or water treatment sludge as provided in this Order, is prohibited.

4. The discharge of solid waste containing free liquid or moisture in excess of the waste's moisture holding capacity to landfill units is prohibited.

5. The discharge of wastes to the Class II landfill other than those specified in Finding Nos. 17, 18, and 19 is prohibited.

6. The discharge of wastes to the Class II surface impoundment other than those specified in Finding No. 20 is prohibited.

7. Discharge outside specified waste management units is prohibited.

8. The direct discharge of wastes to surface waters or surface water drainage courses is prohibited.

9. No waste management units shall be located in the 100-year floodplain.

10. The unauthorized discharge of liquid waste from the Class II surface impoundment is prohibited.

11. The discharge of waste within 50 feet of surface waters is prohibited.

12. The discharge of wastes which have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the unit, could produce violent reaction, heat, or pressure, fire or explosion, toxic by-products, or reaction products which in turn:

    a. require a higher level of containment than provided by the unit;
    b. are restricted “hazardous wastes”; or
    c. impair the integrity of containment structures

    is prohibited.

B. DISCHARGE SPECIFICATIONS

1. The waste discharges shall remain within the designated disposal areas at all times.

2. The dissolved oxygen content of the Class II surface impoundment and the storm water holding and settling basins shall not be less than 1.0 mg/l.

3. The Class II surface impoundment shall have sufficient storage capacity to accommodate leachate, landfill gas condensate, septage pump truck washout, design seasonal precipitation, and ancillary infiltration and inflow during the winter months. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

4. At least two-feet of freeboard shall be maintained in the Class II surface impoundment at all times.

5. By **1 November** each year, available capacity in the Class II surface impoundment shall at least equal the volume necessary to comply with Discharge Specifications No. 3 and No. 4.

6. The Class II surface impoundment shall be managed to prevent breeding of mosquitoes.

7. Public contact with wastes and leachate shall be precluded through such means as fences, signs, and other acceptable alternatives.

8. Dewatered sewage or water treatment sludge may be accepted for disposal in the Class II landfill if the sludge contains at least 20 percent solids (primary sludge) or 15 percent solids (secondary sludge), is mixed with refuse or soil at a minimum solids-to-liquid ratio of 5:1 by weight, and does not exceed the initial moisture holding capacity of the solid waste.

9. Any proposed change in sludge use or disposal practice shall be reported to the Executive Officer at least 90 days in advance of the change.

GENERAL WMU CONSTRUCTION

10. Municipal solid waste shall be discharged to an area equipped with a containment system which meets the minimum requirements for liners, covers, and leachate collection systems specified below.

11. All new landfill unit liners shall be a composite liner consisting of a 60-mil thick high-density polyethylene flexible membrane and either at least two feet thick of soil that has an hydraulic conductivity of no more than $1x10^{-7}$ cm/sec or a geosynthetic clay liner (GCL).

12. All liner systems shall include a leachate collection and removal system (LCRS) that shall convey to an appropriately lined sump or other appropriately lined collection area all leachate that reaches the liner. The LCRS shall not rely upon unlined or clay-lined areas for such conveyance.

13. Leachate generation by a landfill unit LCRS shall not exceed 85% of the design capacity of the sump pump. If leachate generation exceeds this value or if the depth of fluid in an LCRS exceeds the minimum needed for pump operations, then the Discharger shall immediately cease the discharge of sludges and other high-moisture wastes to the landfill unit and shall notify the Regional Board in writing within seven days. Notification shall include a timetable for corrective action necessary to reduce leachate production.

14. Prior to any expansion of the Class II landfill liner system, the Discharger shall submit a liner performance demonstration showing that the proposed liner system meets the Class II performance standard given in Section 20310(a) of Title 27.

15. Each landfill unit phase constructed after the effective date of this Order shall be designed and constructed in accordance with Title 27 and this Order and approved by Regional Board staff prior to operation. **Ninety days** prior to the beginning of construction for each new construction phase, a Final Design Report shall be submitted to Regional Board staff for review and approval and shall include, but not be limited to, the engineered design plans, the contract specifications, a construction quality assurance (CQA) plan to verify that construction specifications will be met, and a revised water quality monitoring plan. Approval of the final design report shall be obtained from Regional Board staff prior to the construction of the landfill liner or cover. A final construction report shall be submitted for approval by Regional Board staff after each phase of construction and prior to the discharge of waste into the constructed phase. For cover construction, the final construction report shall be submitted within **ninety days** of completion of construction for approval by Regional Board staff. The final construction report shall include, but not be limited to, as-built plans, a CQA report with a written summary of the CQA program and all test results, analyses, and copies of the inspector's original field notes, and a certification as described in the Standard Provisions and Reporting Requirements.

16. The hydraulic conductivity of the low permeability barrier layer for the Class III landfill covers shall be $1x10^{-6}$ cm/sec or less. Class II landfill clay liners shall have a hydraulic conductivity of $1x10^{-7}$ cm/sec or less and covers shall have a hydraulic conductivity of $1x10^{-6}$ cm/sec or less. The minimum relative compaction shall be 90 percent of maximum dry density. GCL materials shall have a maximum permeability of $5x10^{-9}$ cm/sec. Hydraulic conductivities of liner materials shall by determined by laboratory tests using solutions with similar properties as the fluids that will be contained. Hydraulic conductivities of cap materials shall be determined by laboratory tests using water. Hydraulic conductivities determined through laboratory

methods shall be confirmed by an appropriate number of field tests in accordance with the Standard Provisions and Reporting Requirements.

17. LCRS shall be designed, constructed, and maintained to collect twice the anticipated daily volume of leachate generated by the WMU and to prevent the buildup of hydraulic head on the underlying liner at any time.

18. All unlined landfill areas that do not have an approved final cover shall have an interim cover constructed of soil with a permeability of $1x10^{-5}$ cm/sec or less and a minimum relative compaction greater than 90 percent, or a geosynthetic cover to preclude rainwater percolation to the waste, consistent with a Regional Board staff approved construction quality assurance plan. All lined landfill areas that do not receive wastes for 180 days or more shall have an interim cover designed and constructed to minimize percolation of liquids through wastes.

Supervision and Certification of Construction

19. All containment structures shall be designed and constructed under the direct supervision of a California registered civil engineer or a certified engineering geologist and shall be certified by that individual as meeting the prescriptive standards and performance goals of Title 27 prior to waste discharge.

LANDFILL CLOSURE SPECIFICATIONS

20. The remaining 15.8-acre unclosed area of the Class III landfill unit shall receive a final cover consisting of, at a minimum, the following:

    a. The existing foundation layer and compacted clay layer that in combination shall be at least two-feet thick, except at the 0.6-acre “inactive” area that shall include at least two-feet of foundation layer.

    b. A 60-mil LLDPE geomembrane that shall be textured on one or both sides pending the results of a slope stability analysis.

    c. A geocomposite drainage layer on slopes where determined necessary by the required slope stability analysis.

    d. A one-foot thick vegetative soil layer capable of sustaining vegetation necessary to prevent erosion.

21. At closure, the Class II landfill unit shall receive a final cover consisting of, at a minimum, the following:

    a. A two-foot thick foundation layer that may contain waste materials.

    b. A one-foot thick clay cover or a GCL.

    c. A 60-mil geomembrane.

    d. A geocomposite drainage layer.

    e. A one-foot thick vegetative soil layer capable of sustaining vegetation necessary to prevent erosion.

22. Vegetation shall be planted and maintained over each closed landfill unit. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth not in excess of the vegetative layer thickness.

23. Closed landfill units shall be graded to at least a three percent grade and maintained to prevent ponding.

LANDFILL POST-CLOSURE MAINTENANCE SPECIFICATIONS

24. During the closure and post-closure maintenance period, the Discharger shall conduct routine maintenance of the final cover, areas with interim cover, the precipitation and drainage control facilities, the groundwater, unsaturated zone and landfill gas monitoring systems, the landfill gas extraction system, and any facilities associated with corrective action.

25. The Discharger shall, in a timely manner, repair any areas of the final cover that have been damaged by erosion, cracking, differential settlement, subsidence or any other causes that could allow ponding of surface water or percolation of surface water into the wastes.

26. The Discharger shall conduct an annual test of all LCRS's to ensure they are functioning as designed.

27. The Discharger shall perform all post-closure maintenance activities specified in the facility's Final Closure and Post-Closure Maintenance Plan that are not specifically referred to in this Order.

PROTECTION FROM STORM EVENTS

28. Precipitation and drainage control systems shall be designed and constructed to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 1,000-year, 24-hour precipitation conditions for Class II WMUs and 100-year, 24-hour precipitation conditions for Class III landfills.

29. Waste management units shall be designed, constructed, and operated in compliance with precipitation and flood conditions contained in the Standard Provisions and Reporting Requirements.

30. Annually, prior to the anticipated rainy season, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the facility and to prevent surface drainage from contacting or percolating through wastes.

C. RECEIVING WATER LIMITATIONS

Water Quality Protection Standards

The concentrations of Constituents of Concern in waters passing through the Points of Compliance shall not exceed the Concentration Limits established pursuant to Monitoring and Reporting Program No. _____, which is attached to and made part of this Order.

D. PROVISIONS

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements, dated August 1997, and which are hereby incorporated into this Order. A violation of any of the Standard Provisions and Reporting Requirements is a violation of these waste discharge requirements.

2. The Discharger shall submit reports required by this Order pursuant to Section 13267 of the California Water Code. Failure to submit the reports by the due dates shown may lead to enforcement action pursuant to Section 13268.

3. The Discharger shall submit to the Regional Board all documentation (i.e., reports, plans, designs) required by this Order for review and approval by Regional Board staff before discharging waste to containment areas or WMUs constructed after the effective date of this Order.

4. The Discharger shall comply with all applicable provisions of Title 27 and 40 CFR Part 258 that are not specifically referred to in this Order.

5. By **30 March 2006**, the Discharger shall submit a Final Closure and Post-Closure Maintenance Plan for those areas of the Class III landfill that have not yet received a final cover. The plan shall include a slope stability analysis for the final cover.

6. By **15 October 2006**, the Discharger shall complete closure of the Class III landfill.

7. By **30 November 2006**, the Discharger shall submit a Construction Quality Assurance Report that documents the completion of final cover installation for the Class III landfill.

8. The Discharger shall remove and relocate any wastes discharged at this facility in violation of this Order.

9. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to the facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.

10. The Discharger shall maintain legible records of the volume and type of each waste discharged at each WMU and the manner and location of the discharge. Such records shall be maintained at the facility until the beginning of the post-closure maintenance period. These records shall be available for review by Regional Board staff.

11. The Discharger shall provide proof to the Regional Board **within sixty days after completing final closure** that the deed to the landfill facility property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that:

    a. The parcel has been used as a municipal solid waste landfill (MSWLF);

    b. Land use options for the parcel are restricted in accordance with the post-closure land uses set forth in the post-closure plan and in WDRs for the landfill; and

    c. In the event that the Discharger defaults on carrying out either the post-closure maintenance plan or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.

12. The Discharger shall maintain waste containment facilities and precipitation and drainage controls, and shall continue to monitor groundwater, leachate from the landfill units, the vadose zone, and surface waters per Monitoring and Reporting Program No. _____ throughout the active life of the waste management units and post-closure maintenance period.

13. The post-closure maintenance period shall continue until the Regional Board determines that remaining wastes in all WMUs will not threaten water quality.

E. FINANCIAL ASSURANCE

The Discharger shall maintain assurances of financial responsibility for initiating and completing corrective action for all known and reasonably foreseeable releases from the waste management units. The Discharger shall also maintain an irrevocable closure fund or other means to ensure adequate closure and post-closure maintenance of each waste management unit for a period of not less than 30 years following the closure of each waste management unit.

F. REPORTING REQUIREMENTS

1. The Discharger shall comply with the reporting requirements specified in this Order, in Monitoring and Reporting Program Order No. _____ and in the Standard Provisions and Reporting Requirements, which are attached hereto and made part of this Order.

2. Closure and post-closure maintenance plans shall comply with 40 CFR 258.60 and 258.61, with Title 27, and with Title 14 of the CCR.

3. The Discharger shall notify the Regional Board in writing of any proposed change in ownership or responsibility for construction or operation of the WMUs. The Discharger shall also notify the Regional Board of a material change in the character, location or volume of the waste discharge and of any proposed expansions or closure plans. This notification shall be given 120 days prior to the effective date of the change and shall be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these WDRs.

4. In the event of any change in ownership of this waste management facility, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Regional Board.

5. Beginning on **1 May 2006**, and every five years thereafter, the Discharger shall submit a status report to the Regional Board regarding financial assurances for corrective action, closure, and post-closure maintenance that either validates the ongoing viability of the financial instrument or proposes and substantiates any needed changes.

I, KENNTH D. LANDAU, Acting Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____.

_____
KENNETH D. LANDAU
Acting Executive Officer

Attachments

WLB